OUR NAVIGATION LAWS.

BY CHARLES H. CRAMP.

WHEN one traces the history of the navigation laws of the United States, beginning with the act of December 31, 1792, which closed American registry to foreign-built vessels except as to prizes taken in war, down to the present time, there appears cumulative evidence that the policy had its origin in the spirit of national independence, commercial as well as political. Superficial students and shallow reasoners associate our navigation laws with the doctrine of protection, as embodied in our tariff system. But in point of fact, there is no association between them.

The object of the Revolutionary fathers in enacting the prohibitive navigation law of 1792 was to provide for the development and perpetuity of shipbuilding in the United States as an indispensable condition of commercial independence and as an unfailing nursery of naval strength. At that time there was no need of protection to American shipbuilding, in the tariff sense of the term.

The *Pennsylvania Packet*, in its issue of May 7, 1790, contained the following review of the then comparative state of shipbuilding in America and Europe, from the financial point of view:

"Shipbuilding is an art for which the United States are peculiarly qualified by their skill in the construction and by the materials with which their country abounds. . . .

"They build oak vessels on lower terms than the cheapest European vessels of fir, pine, and larch. The cost of a white-oak ship in New England is about 24 Mexican dollars per ton, fitted for sea; a fir vessel costs in the ports of the Baltic 35 Mexican dollars per ton; though the American oak ship is much safer and more durable. The maximum cost of a vessel of the highest class of American live oak and cedar, which with salted timbers will last 30 years without repair, is only 36 to 38 dollars per ton in our different ports; while an oak ship, fitted in a similar manner, in the cheapest ports of England, Holland, or France, will cost 55 to 60 dollars per ton."

This relative state of the first cost of ships existed at the date of the passage of the prohibitory law in 1792. Hence, it could not have been a merely protective measure, in the tariff sense, because under the conditions stated by the *Pennsylvania Packet* there could have been no competition.

The policy of the fathers had a broader basis, a deeper foundation, and a wider scope of patriotism and foresight. They realized that American-built ships were not only less costly, but better and more efficient vehicles of commerce than contemporary foreign ships. They knew that, at the then prevailing rates of cost, it would be impossible for any American merchant to import a newly built foreign ship. Therefore, the immediate object of their law of 1792 could not have been else than to prohibit the purchase and registry of old and partly worn-out foreign ships, and thereby to maintain in our merchant marine the high standard of superiority due to the greater skill of American builders, and the better grade of American materials. But this was not their only purpose. With foresight amounting to prophecy they seemed to divine the vicissitudes of the future. So, at the very beginning of the federal government they laid this navigation law of 1792 as one of the foundation-stones of our domestic polity for all time, and wholly indifferent to mere economic conditions of the day in which they lived.

During the one hundred and one years that have elapsed since George Washington approved the navigation law, the conditions of shipbuilding in America, relatively to those prevailing abroad, have undergone many vicissitudes. At any time between 1790 and 1840 the conditions set forth in the review quoted from the *Pennsylvania Packet* prevailed, and the United States continued to enjoy the advantage of her natural resources and the superior skill of her naval architects and shipwrights. But, as England's supply of timber vanished, her production of metals increased, which fact naturally caused the evolution of the iron ship.

The practicability of the use of iron in ship construction had been seen long before it became a commercial fact, but while the system was early known, the development of proper structural devices was of slower progress. As early as 1823 Captain De Montgery, of the French Navy, published a valuable work entitled *Memoire sur les Navires en Fer,* in the form of papers in the *An-*

nales de l'Industrie Nationale et Étrangère, which were subsequently reprinted in a small book in 1824. Captain Montgery introduced his work with the remark that "one might, perhaps, trace the origin of iron vessels to an invention of Demetrius Poliorcetes when he was besieging Rhodes, 304 years before the present era."

After some other interesting historical researches, Captain Montgery pointed out that the chief obstacle to successful shipbuilding in iron at that time (1823–24) was due to the lack of suitable machinery for working and shaping the material. This, he said, could not be done by hand as in the case of wooden ships, and he left the matter of inventing or adapting the necessary mechanical appliances for metal construction to the skill of practical shipbuilders.

These achievements came along quite slowly during the twenty years immediately following Captain Montgery's suggestion. The capacity of plate and shape mills was limited to small sizes and light weights. Punching, bending, and other ship-shed appliances were crude and costly. The old woodworking shipwrights did not at first take kindly to the new material. In fact the first iron hulls were built by boilermakers, on plans prepared by the wood-ship builders.

In this country the development of the iron industry was much slower than in England during the period under consideration, so that, by the time the actual supremacy of the iron ship became established, we were far behind that country in all the essentials for rapid and economical construction. This state of things turned the tables as to first cost, besides relegating the wooden ship to the past. As soon as the English found that they could build iron ships cheaper than we could, and that their iron ships were commercially superior to our wooden ones, they at once began to clamor for repeal of our navigation laws. They rapidly pushed their way into the markets of the rest of the world, building iron ships at great profit to themselves for nearly every nation but our own, and they naturally desired to overrun ours too.

Then began a series of systematic, organized assaults on our navigation laws, always prompted from English sources and gradually adopted as a policy by certain of our lawmakers. These assaults, though made with vigor and sometimes adroitly

managed, failed in every case. Whenever the question came to a vote it was always found that a majority in one or both houses of Congress had inherited the patriotism of their ancestors of 1792.

Had any of these assaults been successful to the extent of wiping the act of 1792 from the pages of the Revised Statutes, there would not now be a first-class shipyard in existence on our soil and we would have been, like Chili and Japan, forced to dicker on the banks of the Clyde for the construction of our new navy, if we had one at all. But aside from the desire of English shipbuilders to create a new market for their product by opening our registry, there is a political cause operating with even greater force to make free American registry a desideratum to England. It lies in the threat of maritime war to which European nations are constantly exposed and which just now happens to be at an acute stage.

At the time of the Franco-German war of 1870-71, even so sturdy a patriot as General Grant, then President, was persuaded for a time that it would be a good thing for our commerce as a neutral nation to permit American registry of foreign-built vessels, the theory being that many vessels of nations which might become involved in the struggle would seek the asylum of our flag.

Actuated by powerful New York influences which found expression through Roscoe Conkling, Edwin D. Morgan, and Hamilton Fish, already conspicuously hostile to the American merchant marine, General Grant in a special message recommended that Congress enact legislation to that end. This proposition was antagonized by Judge Kelley, of Pennsylvania—always at the front when American interests were threatened—in one of his most powerful efforts, couched in the vehement eloquence of which he was master, which impressed General Grant so much that he abandoned that policy, and subsequently adhered to the existing system.

I will not stop here to point out in detail the tremendous political and diplomatic advantage which England would enjoy when dealing with other maritime powers if she could have always at hand an asylum for the lame ducks of her commercial fleet in time of war. Her ocean greyhounds that could either escape the enemy's cruisers, or be readily converted into cruisers

themselves, might remain under her flag; while all her slow freighters, tramps, and obsolete passenger boats of past eras would be transferred by sham sales to our flag, under which they could pursue their traffic in safety during the war under peace rates of insurance, and without any material diversion of their earnings, which would of course be increased by war freight rates, returning to their former allegiance at the end of the war. The lack of such an asylum amounts to a perpetual bond to keep the peace.

From the end of the civil war to about 1880, there was but feeble effort to revive shipbuilding in this country. All our energies of capital and enterprise, as I have remarked elsewhere, were directed to the extension of railways in every direction, to the repair of the war-ravages in the South, to the settlement of the vast territories of the West—in a word, to purely domestic development; pending which, England was by common consent left to enjoy her ocean monopoly.

Such was the state of affairs in 1883–85, when the adoption of the policy of naval reconstruction offered to American shipbuilding the first encouragement it had seen in a quarter of a century.

When we began to build the new navy, every English journal, from the London *Times* down pooh-poohed the idea that a modern man-of-war could be built in an American yard, modern high-powered engines in an American machine shop, or modern breech-loading cannon in an American forge. Many of the English shipbuilders rubbed their hands in actual anticipation of orders from this government for the ships and guns we needed, and they blandly assured us that they would give us quite as favorable terms as were accorded to China, Japan, and Chili. And, to their shame be it said, there were officers of our navy who not only adopted this view, but did all they could to commit our government to the pernicious policy.

In 1885, when Secretary Whitney took control of the Navy Department, the efforts of English shipbuilders to secure at least a share of the work were renewed. By this time the English were willing to admit that the hulls of modern ships could be built in the United States; but they were satisfied that our best policy would be to buy the necessary engines, cannon, and armor from them. Secretary Whitney, however, promptly decided that

the only article of foreign production which the new navy needed was the plans of vessels for comparison. This was wise, because it placed in the hands of our builders the results of the most mature experience abroad, at comparatively small cost. But one of the earliest and firmest decisions of Mr. Whitney was that our naval vessels, machinery and all, must be built at home and of domestic material.

The efforts of the English builders to get the engine-work for our new navy were much more serious and formidable than is generally known. A prominent member of the House Committee on Naval Affairs proposed an amendment to a pending naval bill empowering the Secretary at his discretion to contract abroad for the construction of propelling machinery for our naval ships. The language was, of course, general, but every one knows that the term "abroad" in this sense would be synonymous with Great Britain, and nothing more.

Mr. Whitney promptly met this proposition with a protest in the shape of a letter to the Naval Committee dated February 27, 1886. He said that so far as he was concerned, he would not avail himself of such a power if granted. There was no occasion for such power, and it could have no effect except to keep American builders in suspense and thereby augment the difficulty of obtaining capital for the enlargement of their facilities to meet the national requirements. Mr. Whitney's protest was so vigorous that the proposition died from its effects in the committee, and has been well-nigh forgotten. The proposer himself became satisfied that he had been misled by the representations of naval officers who were under English influence, and did not press his amendment.

I have brought these facts forward for the purpose of emphasizing my declaration that the promotive influence behind every movement against our navigation laws is of British origin, and that whenever you put a pin through a free-ship bill you prick an Englishman.

The portion of Mr. Whitney's letter referring to the proposed free-engine clause in the Naval Bill of 1886 was as follows:

I think our true policy is to borrow the ideas of our neighbors as far as they are thought to be in advance of ours, give them to our shipbuilders in the shape of plans; and, having this object in view, I have been anxious to

acquire detailed drawings of the latest machinery in use abroad, and should feel at liberty to spend more in the same way in getting hold of the latest things as far as possible for the purpose of utilizing them. We have made important accumulations in this line during the last six months. I think I ought to say to the committee that I have placed myself in communication with some of the principal marine-engine builders of the country within the last three months for the purpose of conferring with them upon this subject. I detailed two officers of the navy—a chief engineer and a line officer—who, under my directions, visited the principal establishments in the East. They recognize that in the matter of engines for naval ships we are quite inexperienced as compared with some other countries. It is this fact, doubtless, which the committee has in view in authorizing the purchase and importation of engines for one of the vessels authorized to be constructed under this act. If the committee will permit me to make the suggestion, I find myself quite satisfied, after consultation with people engaged in the industry in this country, that it would not be necessary for me to avail of that discretionary power in order to produce machines of the most advanced character. Our marine-engine builders in general express their inability at the present moment to design the latest and most approved type of engines for naval vessels—an inability arising from the fact that they have not been called upon to do anything of importance in that line. At the same time, they state that if they are given the necessary time, and are asked to offer designs in competition, they would acquaint themselves with the state of the art abroad and here, and would prepare to offer to the government designs embodying the latest improvements in the art. And they are ready to construct at the present time anything that can be built anywhere else if the plans are furnished. As I find no great difficulty in the way of purchasing plans (in fact there is an entire readiness to sell to us on the part of the engine builders abroad) I think the solution of the question will be not very difficult, although it may require some time and a little delay.

It will be noted that but little more than eight years have elapsed since the date of Secretary Whitney's letter. The wisdom of his policy needs no eulogy, beyond the history of the development of steam engineering in the United States during that brief period. In fact no other eulogy could be a tenth part as eloquent as that history is.

In 1886 we were content to purchase engine plans abroad. In 1894 we exhibit to the world the marvellous machinery of the New York, the Olympia, and the Columbia; not to speak of the still higher development that is now being wrought out for the new greyhounds of the American trans-Atlantic line.

The engines of the New York, Olympia, and Columbia have no equals, either in material, workmanship, or performance. Does any one suppose they would have ever been built if Secretary Whitney had adopted the policy of buying our naval engines in England, thereby devoting the resources of the American

treasury to promote a British monopoly? No. In their stead we would have, perhaps, the engines of the Blake, guaranteed to develop 20,000 indicated horse power, and accepted on a performance of 13,000; or the engines of the Vulcan, with deficiency of performance even more pitiable.

The policy of Secretary Whitney was in fact an echo of the sturdy patriotism that framed the act of December 31, 1792, dictated by the same impulse of national independence and conceived in the same aspiration of patriotic pride.

And now, in the face of this record so fresh and recent, the same old demand for English free ships is heard again in our midst, promoted by the same old lobby and pressed on the same old lines. Are we never to hear the last of it? Is there to be a perennial supply of American legislators willing to promote a British industry by destroying an American one? To all history, to all logic, they oppose a single phrase: "Let us buy ships where they are cheapest." Well, if national independence is valueless, and if everything is to be subordinated to cheapness, why not get our laws made in the House of Commons? The members of the House of Commons legislate for nothing. Senators and Representatives charge $5,000 a year for their services, besides stationery allowance and mileage. The House of Commons makes laws cheaper than our Congress does. Our ships and our capacity to create them are as much a symbol of independence as our laws are; and if it is good policy to get the former where they are cheapest, why not get the latter on the same terms?

Two years ago I discussed in these pages "The First Cost of Ships," pointing out, among other things, the enormous progress that has been made in the development of ships and engine building and contributory industries in a brief space by reason of the reconstruction of the navy under a domestic policy. Last November I contributed a paper to the "Proceedings of the American Society of Naval Architects and Marine Engineers," in which I stated that, notwithstanding the privilege embodied in Section 8 of the existing tariff to import material of foreign production free of duty for use in the construction of vessels designed for the foreign trade, I had not taken advantage of it, but had placed orders for many thousand tons of steel with American rolling mills, forges, and foundries.

I had to pay something more for American material than British material would have cost delivered here, but there were certain mechanical and financial considerations involved which in my judgment more than offset this disparity. Hence we may dismiss the question of material and consider only that of labor, which represents a very large percentage of the cost of a ship.

In this particular the English builders have an undoubted advantage over us, as will appear from the subjoined tables of comparative wages embracing twenty occupations. I have not depended on the consular reports, but have compiled them through my own sources of information from the actual payrolls respectively of British ship-yards and our own. In reducing British wages to our standard I have taken the shilling as the equivalent of our quarter of a dollar. I have also brought all wages to a weekly basis, taking the average yearly rate of fifty-six hours to the week in the British yards:

Trade.	British Rate.	American Rate.	Trade.	British Rate.	American Rate.
Patternmakers	$9.00	$18.00	Shipshed machine men	$7.20	$15.00
Machinists	8.50	15.00	Furnacemen	6.00	10.80
Riveters	7.50	12.00	Riggers	7.20	11.00
Calkers and chippers	7.80	15.00	Plumbers	9.60	19.50
Beam and angle smiths	8.40	15.00	Drillers	6.40	11.00
Holders-on	4.20	9.00	Sheetiron workers	8.50	15.00
Fitters-up	7.80	15.00	Coppersmiths	8.60	18.00
Ship carpenters	9.60	18.00	Moulders, iron	9.00	14.50
Joiners	9.00	16.50	Moulders, brass	9 00	15.00
Painters	9.60	18.00	Laborers	4.20	$8 to $9

These figures are taken direct from the books of representative shipyards in the United States and Great Britain, and represent average rates for 1893. The comparison tells its own story. Brushing aside sophistry and cant, we have in front of us a plain proposition, the logic of which no man can evade. It is simply this:

A vote for English free ships means a vote to reduce the wages of American patternmakers from $18 a week to the British rate of $9; of American machinists from $15 a week to $8.50; of American boilermakers from $15 a week to $8.50; of American sheet-iron workers from $15 a week to $8.50; of American coppersmiths from $18 to $8.60; of American plumbers and pipe fitters from $19.50 per week to $9.60; of American carpenters from $18 a week to $9.60; of American drillers from $11 a week to $6.40; of American fitters-up from $15 a week to $7.80; of American riveters from $12 a week to $7.50; of American calkers from $15 a week to $7.80; of American moulders from $15 a week to

$9; of American furnacemen from $11 a week to $6; of American painters from $18 a week to $9.60; of American joiners from $16.50 a week to $9; of American common laborers from $9 a week to $4.20.

There is no alternative to these reductions of wages except total closing of American shipyards, which of course would reduce all shipbuilding wages from their present rates to nothing. This is what men mean when they talk about buying ships where they are cheapest. This is what makes ships cheaper in England than here. And this too is what makes English ships inferior to American ships, class for class and rate for rate; it is because $18 a week will buy better skill and greater diligence than $9 or $10 a week in any country or under any flag.

As a collateral argument in favor of free ships we are informed by the last report of the Post-Office Department that the act of March 3, 1891, providing for ocean mail service in American vessels has not resulted in any improvement of the merchant marine.

The solemnity with which this information is offered to the country indicates that its authors considered it important. Less than three years have elapsed since that law was enacted. Without reference to its merits as an economic policy, but from the practical point of view, not much progress could be expected in that time, unless merchant fleets are supposed to spring from the brain of Congress full panoplied like Minerva from the brow of Jove. However, a broader survey of the situation shows that there has been material improvement of the merchant marine consequent upon that act.

In conjunction with another act which created the nucleus of an American line of trans-Atlantic greyhounds, the law of March 3, 1891, has caused five new vessels to be under construction, which are in all respects abreast and in many respects ahead of anything now afloat. These vessels are being built in conformity to the requirements of the two acts referred to, under a contract duly executed between their owners and the Post-Office Department, to go into active effect in October, 1895, for a period of ten years. This is surely progress and improvement, but the Foreign Mail Bureau of the Post-Office Department has either overlooked or ignored it through impatience with the slow processes inevitable in the production of ships over a tenth of a mile long.

This is somewhat digressive, but it is introduced here by way

of preface to the remark that the capacity to build such ships has been attained but recently by any American shipyard, and hence, unless active hostility to American shipbuilding be admitted as the motive, it is difficult to conceive the rationale of a movement the success of which would be inevitably and almost instantly fatal to the entire industry.

It has been well said that "A great steamship is the grandest triumph of mind over matter." In no other structure appears such a combination of science and skill, such a conspiracy of brain and brawn. When a steamship leaves the yard for her maiden voyage her cost account shows ninety-five per cent. of the total to the credit of labor. There is no charge for right of way, real estate, or accessories. She is a thing of life, an autonomy within herself, and, once off the land, is for the time being a planet. Her deck is the soil of the nation whose flag she bears. Her freight is not only the commodities of commerce, but human lives. Upon her safety and efficiency constantly hang the hopes and loves of thousands. No other thing made by human hands can appeal to the sentiment of men like a great steamship. From this point of view there is an element of public pride, of patriotic exultation in the national possession of great steamships, and it would seem that cognate pride and exultation ought to be cherished in the national capacity to create them. Such a capacity, after years of disheartening struggle against powerful and vindictive rivalry, has at last been attained and is now being exerted with grand results—when Congress is asked to paralyze it for all time.

It has been said that even if the English should build all our ships for us, except those for the coastwise trade under such a law, American shipyards would still flourish on the proceeds of the coastwise construction and the repairs. Did the authors of that theory ever see an establishment entirely devoted to the repair of ships that was equipped to build so much as a tug? The Erie Basin Drydocks in New York are exclusively repair works. Was ever a ship built there? Could one be built there? Certainly not.

As for the resources of the coastwise trade, the state of shipbuilding in this country ten years ago, and before the government came into the market with the new navy, indicates the limit of its possibilities. From 1878 to 1888 there was considerable activity in

shipbuilding for the coastwise trade, resulting in the production of a large amount of tonnage which newly equipped that traffic for a term of years. After 1888 this demand fell off in consequence of having been fully supplied, so that since that time but few orders for further coastwise construction have been offered. The total tonnage of new or comparatively new iron steam tonnage now employed in the coastwise trade, including colliers and ocean tugs employed in barge-towing, is about 340,000, and this, in the opinion of men qualified to judge, is a fair supply for the rest of this century at least.

It is observed that the present English raid on the navigation law is the most determined yet made. This is because the development of shipbuilding capacity in Great Britain during the last decade has outstripped the demand for ships, and there is desperate need of a new market.

France, Germany, Holland, Spain, Russia, and Italy, which were formerly large customers, have in recent years encouraged home shipbuilding by subvention and commercial discriminations, until their patronage has been almost entirely withdrawn from British yards. So severe has been the distress of English shipyards under these conditions that quite recently one of them contracted to build a large ship "at cost," in express terms for the sole purpose of keeping their organization together. Even Japan, which in years past has poured about thirty millions of dollars into England's coffers for ships and guns, has now begun to build her own men-of-war.

Denunciation of our navigation laws as "obsolete" is a fashionable fallacy. It is true that they are among the most venerable of our statutes, the Constitution itself antedating them only three years. But I call attention to the fact that the act of December 31, 1792, was quite as much in force from that time to 1860, when our merchant marine was at its zenith of prosperity, as now, when it is prostrate. This is a historical fact which no one can gainsay. It is therefore not easy to see why a law which promoted such prosperity as our merchant marine enjoyed prior to 1860, should exert an exactly contrary effect in 1894. At any rate it would require a new school of logic to prove that it has worked both ways. Denunciation of every business transaction between the government and steamship owners as "subsidy" is also a fashionable fad.

Steamship owners who perform public service by transporting ocean mails undoubtedly expect pay for it; but I am unable to see why a certain sum when paid to a railroad company or a river steamboat for mail-carrying under contract should be called "compensation," and when paid to an ocean steamship company for similar service should be called "subsidy."

The five maritime great powers of Europe—England, France, Germany, Russia, and Italy—during the year 1893 paid £3,331,573 sterling, or, roughly, $16,657,865, for the transportation of their mails by sea. England paid $4,360,000, including the "retainer" of 20 shillings per ton per annum to the vessels enrolled as convertible cruisers for the auxiliary fleet. France paid, including both mail compensation and tonnage bounty, $5,356,000. Germany paid, inclusive of discriminations in taxes, port dues, and lighthouse fees in favor of ships built in Germany, $1,962,000, of which $1,200,000 went to one company, the North German Lloyd.

In all these cases the transactions are considered as being in the nature of fair compensation for actual services, and no one denounces them as subsidy. It would appear that compensation for service becomes "subsidy" only when paid to an American shipowner. Summing up, it appears that the actual, practical, valid reasons for the repeal of our navigation laws are:

1. That it would open a new and much needed market for the product of over-developed English shipyards.

2. That it would offer to English shipowners opportunity to unload their obsolete and worn-out tramps from the foot of their list upon our "bargain-hunters," enabling them to recruit at the top with new ships.

3. That it would release England from her bond to keep the peace by opening an asylum for her commercial fleet whenever she might desire to make war on a maritime power.

These reasons are all English.

There are no American reasons.

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